

REMARKS

Claims 24-33 and 37 remain pending, of which claims 34-36 were withdrawn from consideration. No claims have been amended, cancelled, or newly added. In view of the following comments, allowance of all the claims pending in the application is respectfully requested.

IMPROPER CLAIM CONSTRUCTION AND FINALITY OF THE OFFICE ACTION

The Examiner states:

In view of the § 112, first paragraph [rejection], the question of whether Feng makes no mention or suggestion is irrelevant, and the question of whether to determine a predictable use of Buchar or Feng elements according to their established functions is inapplicable until the rejection is resolved.

[Office Action, page 3].

Applicant submits that treatment of the claims was improper. Even assuming *arguendo* that the subject matter of claims 24-33 and 37 may not have been fully supported by the specification as Examiner asserts (which Applicant does not concede for the reasons discussed below), Applicant submits that it was improper to not consider this subject matter. In fact, during examination, all limitations of the claims must be considered and given weight, including limitations which do not find support in the specification as originally filed (i.e., new matter). *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983) *aff'd mem.* 738 F.2d 453 (Fed. Cir. 1984); MPEP § 2143.03 II.

Further, the Examiner's claim construction clearly ignores the plain language of the claims as previously amended. Indeed, claim 24 explicitly recites "determine a scanned image alignment registration parameter for aligning a scanned image to the backing surface based on the average chrominance value and the chrominance deviation of the registration channel" and claim 28 recites similar subject matter. The Examiner, on the other hand, simply chose to disregard these recitations. To be sure, "[a]ll words in a claim must be considered in judging

the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Accordingly, Applicant submits that the art rejection of claims 24-33 and 37 set forth in the Office Action, is erroneous because the limitations thereof were not properly construed in accordance with U.S. patent law. Moreover, Applicant submits that the finality of Office Action is improper because claimed subject matter was not properly examined. "The examiner should never lose sight of the fact that in every case the applicant is entitled to a full and fair hearing, and that a clear issue between applicant and examiner should be developed, if possible, before appeal." MPEP § 706.07. As discussed above, this did not happen.

REJECTION UNDER 35 U.S.C. §112, FIRST PARAGRAPH

Claims 24-33 and 37 were rejected under 35 U.S.C. §112, first paragraph, for allegedly failing to comply with the written description requirement. Applicant respectfully traverses this rejection for at least the following reasons.

The Examiner asserts:

The original disclosure does not support "determine[ing] a scanned image alignment registration parameter for aligning a scanned image to the backing surface based on the average chrominance value and chrominance deviation of the registration channel". Claim 24 (emphasis added). Claim 28 by analogy.

[Office Action, page 4 (emphasis in original)].

The rejection is improper because the disclosure does adequately support the previously amended features of claims 24 and 28.

Under *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991), to satisfy the written description requirement, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention, and that the invention, in that context, is whatever is now claimed.

However, that exact terms need not be used *in haec verba* to satisfy the written description requirement of the first paragraph of 35 U.S.C. § 112. *Eiselstein v. Frank*, 52 F.3d 1035, 1038, 34 USPQ2d 1467, 1470 (Fed. Cir. 1995); *In re Wertheim*, 541 F.2d 257, 265, 191 USPQ 90, 98 (CCPA 1976). *See also* 37 CFR § 1.121(e) which merely requires *substantial* correspondence between the language of the claims and the language of the specification.

For example, in the Specification, Applicant describes:

... when scanning documents utilizing a digital scanning system, it is desirable to utilize a light absorbing (e.g., black or dark) backing¹ ... to enable automatic location and orientation of the original being scanned, thereby enabling auto-registration and electronic deskewing processes to be performed.

[¶ 21, emphasis added].

Applicant further describes:

After each channel identifies a detected edge, a resolution operation is performed to determine which of the detected edges is the "actual" document edge. This actual document edge can the be used for subsequent document registration and skew processing.

[¶ 50, emphasis added].

As such, Applicant submits that it should be clear to one having ordinary skill in the art having read Applicant's disclosure, that the aforementioned *registration* and *deskewing* functions concern aligning the scanned image. And it should be clear that the claimed "registration parameter" may be used for aligning a scanned image to the backing surface, as claims 24 and 28 recite.

In addition, the Examiner *admits* that the specification uses the term "aligned." [See Office Action, page 4 (quoting ¶ 4 of Applicant's Specification)]. Indeed, paragraph [0004]

¹ The backing may include a platen cover, or in the case of a constant velocity transport (CVT) device, a baffle or ski. See ¶ 5.

describes "... the scanner uses the edge detection operation to determine the presence, exact location, and size of a document being imaged in a CVT device. Such registration operation becomes extremely important issue in the case of dual head scanners to ensure that the front and backside of a scanned page is perfectly aligned." (emphasis added). Applicant's invention may also use a constant velocity transport (CVT) system. [See, e.g., ¶ 23 ("Turning now to FIG. 1, there is illustrated a portion of a constant velocity transport (CVT) document handler and imaging system 10 operable in accordance with the teachings disclosed herein.")]. Thus, it should be quite clear from Applicant's disclosure that the claimed invention may be used to perform similar alignment operations with a CVT. The claimed invention does not fundamentally change how alignment occurs, but rather how registrations parameters which may be used for such alignment are determined.

Moreover, even if Applicant's Specification may further describe performing "edge detection" operations, as pointed out by the Examiner, "... it is important not to import into a claim limitations that are not part of the claim." *Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004); see also *Liebel-Flarsheim Co. v. Medrad Inc.*, 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004) (discussing cases in which the court expressly rejected the contention that even if a patent may describe only a single embodiment, the claims of the patent must be construed as being limited to that embodiment). Neither claim 24 nor claim 28 recites "edge detection."

For *at least* the foregoing reasons, Applicant submits that the rejection of claims 24-33 and 37 under 35 U.S.C. § 112, first paragraph, is improper and must be withdrawn.

REJECTION UNDER 35 U.S.C. § 103

Claims 24-33 and 37 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. 2002/0126299 to Buchar (hereinafter "Buchar") in view of U.S. Patent No. 6,356,672 to Feng (hereinafter "Feng"). Applicant traverses this rejection of at least the following reasons.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Office to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Office must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). "[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability." *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Indeed, "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR Int'l Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) (citing *United States v. Adams*, 383 U.S. 39 (1966)). Rather, the proper test for obviousness is "... whether the improvement is more than the predictable use of prior art elements ***according to their established functions.***" 82 USPQ2d at 1396. (emphasis added).

Claim 24 recites, *inter alia*, the feature of:

- a registration parameter detection circuit configured to:
 - receive image data comprising a representative sample of the backing surface, the image data ***including chrominance values*** in the multiple channels for selected pixel locations along a scanline;
 - automatically ***determine an average chrominance value for each of the multiple channels;***
 - select a registration channel from the multiple channels based on the average chrominance values;
 - determine ***a chrominance deviation*** for the registration channel; and
 - determine a scanned image alignment registration parameter for aligning a scanned image to the backing surface based on the average chrominance value and the chrominance deviation of the registration channel.***

Similarly, claim 28 recites, *inter alia*, the features of:

- obtaining image data comprising a representative sample of the backing surface, the image data ***including chrominance***

values in multiple channels for selected pixel locations along a scanline;

determining an average chrominance value for each of the multiple channels;

selecting a registration channel from the multiple channels based on the average chrominance values;

determining a chrominance deviation for the registration channel; and

determining scanned image alignment registration parameters for aligning a scanned image to the backing surface based on the average chrominance value and the chrominance deviation of the registration channel.

[Emphasis added].

The cited portions of Buchar and Feng, either alone or in combination, do not teach or otherwise render obvious at least the above-emphasized features of independent claims 24 and 28 for *at least* the reasons that (i) Buchar does not teach using chrominance values for detecting a registration parameter; and (ii) although Feng teaches chrominance values, they are used for an entirely different purpose than Applicant's claimed invention requires.

I. Buchar does not teach using chrominance values for detecting a registration parameters.

Buchar discloses detecting gray level (i.e., luminance) values of the pixels corresponding to the ski for each channel, then performing edge detecting based on the detected luminance value. [See, e.g., Buchar, ¶ 33]. However, as *acknowledged* by the Examiner, Buchar makes no mention or suggestion of detecting or using chrominance values. [See Office Action, page 7]. Buchar therefore fails to teach "determine[ing] a scanned image alignment registration parameter for aligning a scanned image to the backing surface based on the average chrominance value and the chrominance deviation of the registration channel."

II. Although Feng teaches using chrominance values for an entirely different purpose than Applicant claimed invention requires.

Further, even assuming, *arguendo*, that it was proper to combine Buchar and Feng (which Applicant does not concede), Applicant submits that the cited portions of Feng do not overcome the deficiencies of Buchar.

For example, the cited portions of Feng make no mention or suggestion of “determine[ing] a scanned image alignment registration parameter for aligning a scanned image to the backing surface based on the average chrominance value and the chrominance deviation of the registration channel.”

The Office Action, though, asserts that Feng teaches chrominance values. [See Office Action, page 7]. Even so, Feng teaches using chrominance values for an entirely different purpose than claimed.

For example, Feng teaches using luminance and chrominance channel information to capture accurate color pixel information. Figure 1 of Feng shows pixel misalignment (or misregistration) in a scanned image where chrominance signals have been conventionally derived from R-Y and R-B sensor readings. [See *also* Feng, col. 1, line 56 – col. 2, lines 9]. This may lead to fringing or blurring of the image. On the other hand, by following the method taught by Feng, color registration error within the scanned image may be reduced. In fact, Feng teaches that the goal of the registration is to produce an accurate RGB or CMYK image output by separately capturing luminance and chrominance values. [See Feng, col. 6, lines 17-19; Figure 4: box 86; and col. 5, lines 32-34].

The cited portions of Feng, however, are silent regarding determining a scanned image alignment registration parameter for aligning a scanned image to the backing surface based on the average chrominance value and the chrominance deviation of the registration channel. Instead, in Feng, “*registration*” refers to aligning luminance color pixels with chrominance color pixels to produce a final image. [See Feng, col. 1, lines 7-9 (“a method of refining color registration within the final image”)]. Applicant submits that one could have perfectly aligned

color pixels within an image (e.g., as taught by Feng), but that the resulting image may still be poorly registered against the backing surface or output media. Indeed, these are two different problems.

Thus, Applicant submits that the Office Action fails to demonstrate that the claimed invention is merely a "predictable use of prior art elements *according to their established functions*." KSR, 82 USPQ2d at 1396 (emphasis added). More particularly, neither the cited portions of Buchar nor Feng teach or otherwise render obvious "determine[ing] a scanned image alignment registration parameter for aligning a scanned image to the backing surface based on the average chrominance value and the chrominance deviation of the registration channel."

By contrast, according to one aspect of Applicant's invention, the chrominance information may be used to compare against the background surface color. This may be useful, for example, in a CVT reproduction system with a readily detachable scanner backing ski that allows a user to select an appropriate backing for a given application, and may be particularly useful when there is insufficient luminance variation between the input document and the color of the ski in any available channels. [See, e.g., Applicant's Specification, ¶ 8]. The chrominance information in Applicant's claimed invention is not merely being used for aligning pixels within a final image.

* * *

For *at least* the foregoing reasons, Applicant submits that a *prima facie* case of obviousness has not been established and that the cited portions of Buchar, Feng, or a proper combination thereof, fail to disclose or render obvious each and every feature recited by claims 24 and 28. Claims 25-27 and 29-33 and 37 depend from claims 24 and 28, respectively, and are patentable for at least the same reasons provided above related to claims 24 and 28, and for the additional features recited therein. Thus, Applicant respectfully submits that the rejection under 35 U.S.C. §103(a) of claims 24-33 and 37 over Buchar in view of Feng should be withdrawn and the claims be allowed.

CONCLUSION

Having addressed each of the foregoing rejections, it is respectfully submitted that a full and complete response has been made to the outstanding Office Action and, as such, the application is in condition for allowance. Notice to that effect is respectfully requested.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

If an extension of time is necessary to prevent abandonment of this application, then such an extension of time is hereby petitioned for under 37 C.F.R. §1.136(a). Any fees required (including fees for net addition of claims) are hereby authorized to be charged to **Deposit Account No. 24-0037 (Ref. No. A1667-US-NP/089382-0379237)**.

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Respectfully submitted,

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